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EXAMINER
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ABRISHAMKAR, KAVEH

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/902,683

Applicant(s)

OULD-BRAHIM ET AL.

Examiner

Kaveh Abrishamkar

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/12/2001.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is in response to the communication filed on July 12, 2001. Claims 1 – 21 were originally received for consideration. No preliminary amendments for the claims were received. Claims 1 – 21 are currently being considered.

#### ***Information Disclosure Statement***

2. An initialed and dated copy of the Applicant's IDS form 1449, received on July 12, 2001, is attached to this Office action.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 10-18 are rejected under 35 U.S.C. 101 because they are directed solely to a "data format" containing various data fields. This is non-functional descriptive material, as neither the data format nor the data fields that it contains perform any specific data manipulation, or effect any functional change in a computing process. See MPEP 2016.IV.B.1.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 –6, 9-15, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen et al. (RFC 2547: "BGP/MPLS VPNs") in view of Fox et al. (RFC 2685: "Virtual Private Networks Identifier").

Regarding claim 1, Rosen discloses:

A Border Gateway Protocol Speaker (BGP Speaker), in a communication system which implements at least one network based Virtual Private Network (NB-VPN) across a backbone, the at least one NB-VPN using an Open System Interconnect (OSI) layer-2 protocol and an OSI layer-3 protocol, at least one NB-VPN using an OSI layer-2 protocol different from an OSI layer-2 protocol used by the backbone or using an OSI layer-3 protocol different from an OSI layer-3 protocol used by the backbone, the BGP speaker transmitting an Update message being in conformance with a Border Gateway Protocol (BGP), and the Update message further including:

***"VPN Reachability information"*** (page 9, paragraphs 6-7), wherein a VPN route has an associated "Target VPN" attribute which gives reachability information;

***"Tunnel Mechanism information"*** (page 20, paragraphs 1-4).

Rosen does not explicitly disclose "**Virtual Private Network (VPN) Membership information**" or a "**VPN Reachability Mode field**." However, Fox discloses a global VPN identifier (page 1, paragraphs 7-10). This global VPN identifier identifies the VPN to which the data belongs (VPN membership information), and allows data to traverse other VPNs and/or the Internet. Therefore, it would have been obvious to use the VPN identifier field of Fox because "it is necessary to identify the VPN in which a particular IP address has meaning" (Fox, page 1, paragraph 5). Further, Fox states that the VPN-ID has a global format and can be used in various ways depending on the implementation (page 1, paragraph 7), so it is possible to segment the VPN identifier in any possible way that is needed by the particular implementation. Therefore, it would have been obvious to include a "VPN Reachability Mode field" because its just a nomenclature assigned to a segment of the VPN-ID field, and can be designated as any type of field as long as it does not exceed the designated update message size.

Claim 2 is rejected as applied above in rejecting claim 1. Furthermore, Rosen discloses:

The BGP Speaker of claim 1. Rosen does not explicitly state that the VPN membership information includes "**at least one VPN identification (VPN-ID) field**" and "**a Number of VPN-IDs field**." However, Fox discloses a global VPN identifier (page 1, paragraphs 7-10). This global VPN identifier identifies the VPN to which the data belongs (VPN membership information), and allows data to traverse other VPNs and/or the Internet. Therefore, it would have been obvious to use the VPN identifier field of

Fox because “it is necessary to identify the VPN in which a particular IP address has meaning” (Fox, page 1, paragraph 5). Further, Fox states that the VPN-ID has a global format and can be used in various ways depending on the implementation (page 1, paragraph 7), so it is possible to segment the VPN identifier in any possible way that is needed by the particular implementation. Therefore, it would have been obvious to include a “Number of VPN-IDs field” because its just a nomenclature assigned to a segment of the VPN-ID field, and can be designated as any type of field as long as it does not exceed the designated update message size.

Claim 3 is rejected as applied above in rejecting claim 1. Furthermore, Rosen discloses:

The BGP speaker of claim 1 wherein “***the VPN reachability information includes zero or more VPN reachability entries***” (page 9, paragraphs 6-7), wherein a VPN route has an associated “Target VPN” attribute which gives reachability information.

Claim 4 is rejected as applied above in rejecting claim 3. Furthermore, Rosen discloses:

The BGP speaker of claim 3. Rosen does not explicitly segment the VPN Reachability Entry into a “***VPN Reachability Type field,***” a “***Length field,***” and a “***VPN reachability Value Field.***” However, the VPN Reachability entry is a block of bits, which can be segmented in anyway deemed appropriate based on the implementation,

as stated by Fox. Therefore, it is obvious to designate names to the sub-fields of the VPN Reachability entry to contain the VPN reachability type, length and VPN reachability value fields.

Claim 5 is rejected as applied above in rejecting claim 1. Furthermore, Rosen discloses:

The BGP Speaker of claim 1 wherein the “***Tunnel Mechanism information includes zero or more VPN Tunnel Entries***” (page 20, paragraphs 1-4).

Claim 6 is rejected as applied above in rejecting claim 5. Furthermore, Rosen discloses:

The BGP Speaker of claim 5. Rosen does not explicitly disclose a VPN Tunnel Entry that includes a “***Tunnel Type field,***” a “***Length field,***” and a “***Tunnel Value field.***” However, the PN Tunnel Entry is a block of bits, which can be segmented in anyway deemed appropriate based on the implementation, as stated by Fox. Therefore, it is obvious to designate names to the sub-fields of the PN Tunnel Entry to contain the designated tunnel type, length and tunnel value fields.

Claim 9 is rejected as applied above in rejecting claim 1. Furthermore, Rosen discloses:

The BGP Speaker of claim 1 wherein the Update message further includes “***a field indicating a topology of a NB-VPN***” (page 10, paragraphs 3-5).

5. Claims 7-8 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen et al. (RFC 2547: "BGP/MPLS VPNs") in view of Fox et al. (RFC 2685: "Virtual Private Networks Identifier") in further of view of Bates et al. (RFC 2283: "Multiprotocol Extensions for BGP-4").

Claim 7 is rejected as applied above in rejecting claim 1. Furthermore, Rosen discloses the BGP Speaker of claim 1. The Rosen-Fox combination does not explicitly disclose the Update Message including a "**unique Subsequent Address Family Identifier (SAFI) value**" indicating that the Update Message includes the "VPN Private Network (VPN) Membership information", "VPN Reachability information" and "Tunnel Mechanism information." Bates discloses a "**unique Subsequent Address Family Identifier (SAFI) value.**" Bates discloses a variable length BGP "Network Layer Reachability Information" field, which can be used to send the VPN information in the update message (page 2, paragraphs 1-3). Bates further discloses the SAFI field (page 2, paragraph 1-3), which provides additional information about the type of Network Layer Reachability information carried in the BGP message. Therefore it would have been obvious that this field could indicate what fields are contained in the message by specifying a specific value. Therefore it would have been obvious to one of ordinary skill in that art at the time the invention was made to use the SAFI field of Bates in conjunction with the Rosen-Fox combination to, as stated by Bates, provide additional



information about the type of Network Layer Reachability information carried in that attribute so that the message could be processed.

Claim 8 is rejected as applied above in rejecting claim 7. The Rosen-Fox combination does not explicitly disclose that the "**unique SAFI value is 129**." Bates disclose that the unique SAFI value for vendor-specific applications is between 128-255, which contains the unique value 129. Therefore, it would have been obvious to use the unique SAFI value of 129 for a vendor-specific application.

6. Claims 10-18 are claims directed to a "data format" analogous to the BGP Speaker claims rejected above, and therefore, are rejected using the same reasoning.

7. Claims 19-21 are claims directed to a "virtual router" analogous to the BGP speaker claims rejected above, and therefore, are rejected using the same reasoning.

**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaveh Abrishamkar whose telephone number is 571-272-3786. The examiner can normally be reached on Monday thru Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KA K.A.  
03/05/05

  
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